



July 8, 2009

Mr. James Aycock  
US Environmental Protection Agency, Region 7  
Mail Code AWMDRESP  
901 North 5<sup>th</sup> Street  
Kansas City, KS 66101

RECEIVED

JUL 09 2009

SUPERFUND DIVISION

Re: Analysis of Soil Lead Recontamination Data for Herculaneum

Dear Mr. Aycock:

Enclosed please find our report analyzing the soil lead recontamination data in Herculaneum, Missouri. This report replaces (and supplements) the analysis of soil lead recontamination that was included in the 2008 draft Community Risk Assessment for Herculaneum.

This report is focused solely on the effects of air lead deposition as a pathway of recontamination. The analysis in the report evaluates the property quadrant data, and does not present or discuss the haul road edge samples. We chose to focus only on the quadrant data as the best measure of the effects of air lead deposition, without confounding by other potential sources of lead such as transport from the haul roads.

Attached to this letter are two maps that present the 2009 data for the property quadrants (Figure 1) and the haul road edge samples (Figure 2). Both maps show symbols at the locations where samples were collected. The symbols are color-coded to display soil lead concentrations below 400, between 400 and 1200, and greater than 1200 mg/kg. These figures show that the majority of soil lead samples with concentrations above 400 mg/kg are in the haul road edge data set, while very few samples with concentrations above 400 mg/kg are found in the quadrant composites and away from the haul roads. These data suggest that soil along the haul road edges is affected by pathways of recontamination other than only air deposition, likely including materials from transport of ores on the roads. However, some of the roadside remediation was done a number of years ago and it may be that areas were recontaminated during a period before the improvements in transport system and truck washing at the mines as well as at the smelter were installed.

We will be happy to discuss both these maps and the attached report with you at your convenience.

Sincerely,

GRADIENT CORPORATION

A handwritten signature in cursive script, reading 'Teresa S. Bowers'.

Teresa S. Bowers, Ph.D.  
Principal

Enclosures

cc: Bruce Morrison

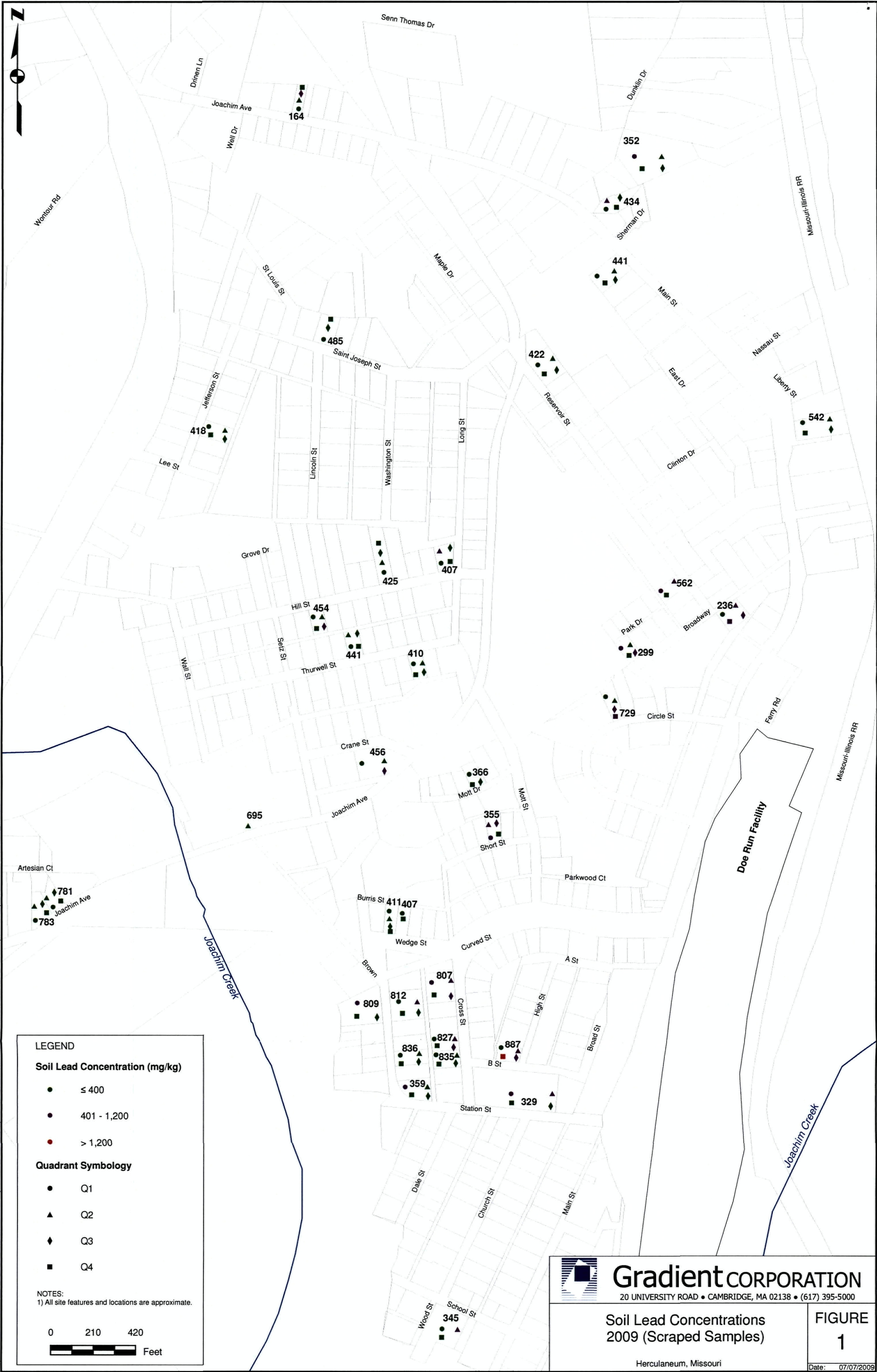
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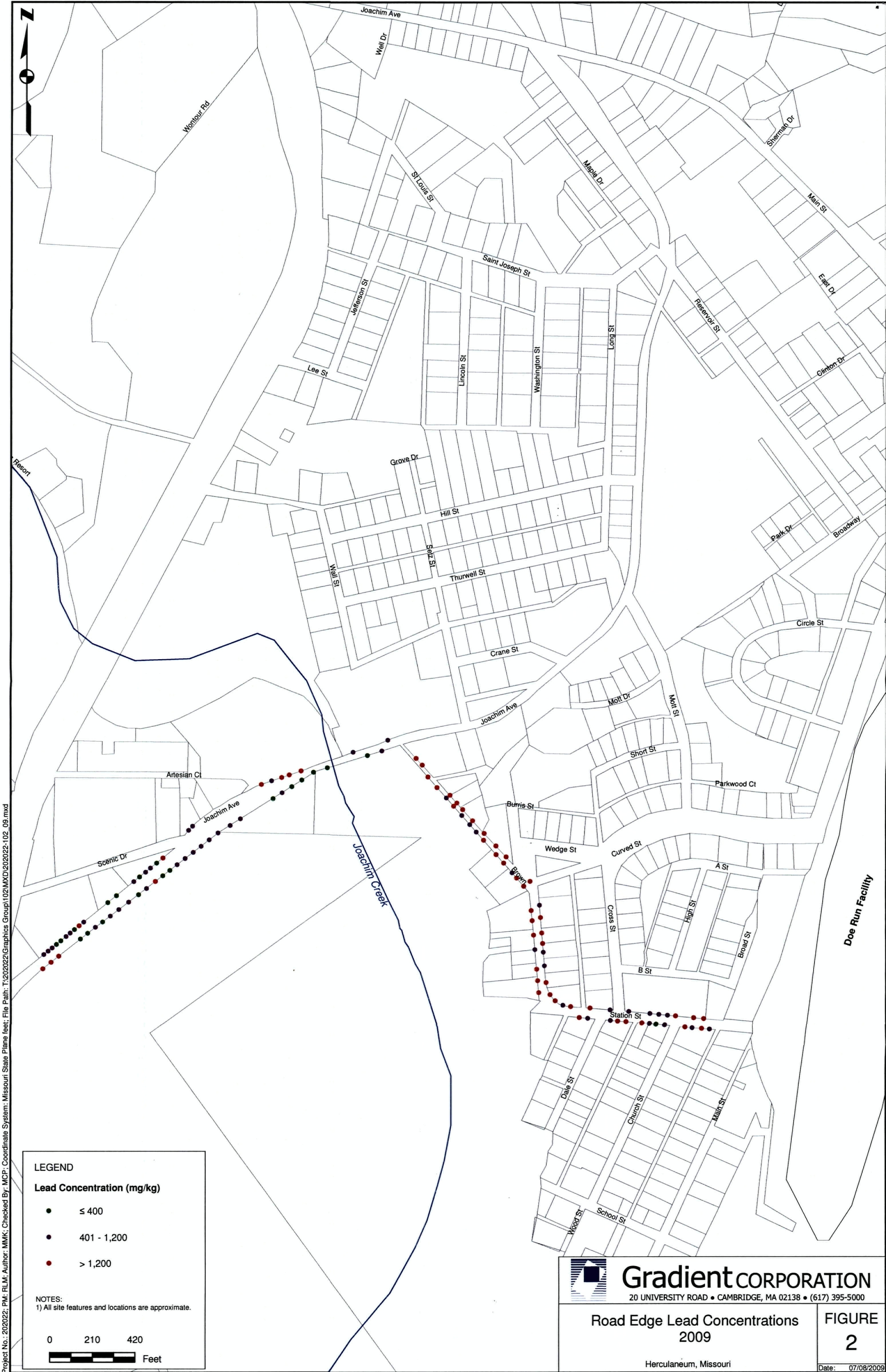


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Project No.: 202022; PM: RLM; Author: MMK; Checked By: MCP; Coordinate System: Missouri State Plane feet; File Path: T:\202022\Graphics Group\102\MXD\202022-102\_07.mxd







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